5. (Withdrawn) An image processing apparatus converting a first image signal representing a level in density of each pixel with a predetermined number of tones, successively into a second image signal with a number of tones smaller than said predetermined number of tones, comprising:

a determiner successively receiving said first image signal for each pixel and determining a range for a level in density of each pixel;

an inverter inverting a level in density of an input signal when said input signal has the level in density falling within a particular range;

a normalizer normalizing the level in density of said input signal to allow the level in density of said input signal to fall within a predetermined range;

a comparator comparing the level in density normalized with a predetermined threshold value to output a result by comparison;

an outputter referring to a result obtained from said determiner and a result obtained from said comparator to output said second image signal with said number of tones smaller than said predetermined number of tones; and

a corrector referring to the result obtained from said comparator and the level in density normalized, to correct a level in density normalized of a subsequent pixel.

6. (Withdrawn) An image processing apparatus converting an input signal representing a level in density of each pixel with a predetermined number of tones, into a signal with a number of tones smaller than said predetermined number of tones, comprising:

a first outputter comparing said input signal having a level in density falling within a first range with a first threshold value to output a signal of a first tone or a second tone;

a second outputter comparing said input signal having a level in density falling within a second range subsequent to said first range with a second threshold value to output a signal of the second tone or a third tone; and

a controller controlling said first and second threshold values to be provided substantially in succession on a boundary of said first and second ranges.

7. (Withdrawn) The image processing apparatus of claim 6, wherein said controller controls said first and second threshold values to provide a small gap on the boundary of said first and second ranges between said first and second threshold values.

8. (Withdrawn) The image processing apparatus of claim 6, wherein said controller controls said first and second threshold values to be provided in succession on the boundary of said first and second ranges.

Claims 9 - 13 (Cancelled)

14. (Withdrawn) An image processing apparatus converting a first image signal representing a level in density of each pixel with a predetermined number of tones, successively into a second image signal with a number of tones smaller than said predetermined number of tones, comprising:

a determiner successively receiving said first image signal for each pixel and determining a range for a level in density of each pixel;

an inverter inverting a level in density of an input signal when said input signal has the level in density falling within a particular range;

a normalizer normalizing the level in density of said input signal to allow the level in density of said input signal to fall within a predetermined range;

a comparator comparing the level in density normalized with a threshold value to output a result by comparison;

an outputter referring to a result obtained from said determiner and a result obtained from said comparator to output said second image signal with said number of tones smaller than said predetermined number of tones; and

a corrector referring to the result obtained from said comparator and said threshold value to correct a threshold value to be used for processing a subsequent pixel.

15. (Withdrawn) An image processing apparatus converting an input signal representing a level in density of each pixel with a predetermined number of tones, into a signal with a number of tones smaller than said predetermined number of tones, comprising:

an outputter outputting a value serving as a basis for a threshold calculation;

a threshold calculator using said basis for said threshold calculation to calculate at least two threshold values;

a thresholder referring to said at least two threshold values to threshold said input signal; and

a corrector referring to a result obtained from said thresholder and said value serving as said basis for said threshold calculation, to correct a value serving as a basis for a threshold calculation to be used for processing a subsequent pixel.

Claim 16 (Cancelled)

17. (New) An image processing apparatus converting an input signal representing a level in density of each pixel with a predetermined number of tones, into a signal with a number of tones smaller than said predetermined number of tones, comprising:

a first outputter comparing said input signal having a level in density falling within a first range with a first threshold value to output a signal of a first tone or a second tone;

a second outputter comparing said input signal having a level in density falling within a second range subsequent to said first range with a second threshold value to output a signal of said second tone or a third tone;

a switcher determining for each pixel from the level in density of said input signal which of said first and second outputters should be used, and accordingly switching between said first and second outputters; and

a corrector using a difference between the level in density of said input signal and a signal output from one of said first and second outputters to calculate a correction value correcting the level in density of a subsequent pixel and apply said correction value for correction, wherein when said first outputter is switched to said second outputter, or vise versa, a symbol of the correction value calculated by said corrector is inverted.

18. (New) The apparatus of claim 17, wherein for said first, second and third tones a signal which does not output a dot, a signal of a light dot, and a signal of a dark dot are output, respectively.

19. (New) The apparatus of claim 17, wherein to invert the symbol of said correction value, the apparatus further comprises a first inverter inverting the symbol of the correction value obtained from a neighboring pixel, and a second inverter inverting the symbol of the correction value calculated by a subtractor.

20. (New) The apparatus of claim 19, wherein when the level in density of said input signal falls within said first range said first and second inverters do not invert the symbol of the correction value and when the level in density of said input signal falls within said second range said first and second inverters invert the symbol of the correction value.

21. (New) An image processing apparatus converting an input signal representing a level in density of each pixel with a predetermined number of tones, into a signal with a number of tones smaller than said predetermined number of tones, comprising:

a first outputter comparing said input signal having a level in density falling within a first range with a first threshold value to output a signal of a first tone or a second tone;

a second outputter comparing said input signal having a level in density falling within a second range subsequent to said first range with a second threshold value to output a signal of said second tone or a third tone;

a switcher determining for each pixel from the level in density of said input signal which of said first and second outputters should be used, and accordingly switching between said first and second outputters; and

a corrector using a difference between said threshold valued used in one of said first and second outputters for comparison and a signal output from one of said first and second outputters

to calculate a correction value correcting a threshold value used to process a subsequent pixel, and apply said correction value for correction, wherein when said first outputter is switched to said second outputter, or vise versa, the symbol of the correction value of said corrector is inverted.

22. (New) The apparatus of claim 21, wherein for said first, second and third tones a signal which does not output a dot, a signal of a light dot, and a signal of a dark dot are output, respectively.

23. (New) The apparatus of claim 21, wherein to invert the symbol of said correction value, the apparatus further comprises a first inverter inverting the symbol of the correction value obtained from a neighboring pixel, and a second inverter inverting the symbol of the correction value output from a ß multiplier.

24. (New) The apparatus of claim 23, wherein when the level in density of said input signal falls within said first range said first and second inverters do not invert the symbol of the correction value and when the level in density of said input signal falls within said second range said first and second inverters invert the symbol of the correction value.